a second interface unit configured to provide connection to a second network, and

a processor configured to at least

carry out a gateway function between the first network and the second network,

receive an encapsulated packet from the first network via the first interface unit,

decapsulate the received packet, wherein the decapsulated packet comprises a destination address which topologically does not belong to the second network, and

send the decapsulated packet to the destination address to the second network via the second interface unit.

12. The apparatus according to claim **11**, wherein the destination address is an address of a node located in the second network and the destination address is recorded by the processor.

13. The apparatus according to claim **11**, wherein the processor is configured to at least send, after decapsulating the received packet, a multicast message to the second network in order to request a response from the owner of the destination address, and to perform sending of the packet only when a response from the owner of the destination address is received.

14. The apparatus according to claim **11**, wherein the processor is configured to at least perform sending of the decapsulated packet only when predefined rules regarding the network node are met.

15. An apparatus comprising

an interface unit configured to provide connection to a first network, and

a processor configured to at least

receive a packet from a gateway via the first network via the interface unit, wherein the packet is encapsulated and the gateway is located between the first network and a second network,

record the source address of the packet as the address of the gateway,

decapsulate the received packet, and

record the source address of the decapsulated packet as an address of the network node located in the second network, wherein the address of the network node does topologically not belong to the second network.

16. The apparatus according to claim **15**, wherein the processor is configured to at least

create a packet having the address of the network node as a destination address,

encapsulate the created packet into an encapsulated packet having the address of the gateway between the first network and the second network, and

send the encapsulated packet to the gateway.

17. An apparatus comprising

an interface unit configured to provide connection to a first network, and

a processor configured to at least

create a packet having an address of a network node as a destination address, wherein the network node is located in a second network and the address of the network node does topologically not belong to the second network,

encapsulate the created packet into an encapsulated packet having the address of a gateway between the first network and the second network, and

send the encapsulated packet to the gateway.

18. The apparatus according to claim **1**, wherein in the first network and in the second network IPv6 is used.

19. A method comprising

carrying out a gateway function between a first network and a second network,

receiving a packet from a network node located in the second network, wherein the packet comprises a source address which topologically does not belong to the second network,

encapsulating the received packet in a new packet, and

sending the new packet to the first network.

20. The method according to claim **19**, further comprising

using an interface address of a second interface unit configured to provide a connection of the apparatus carrying out the method to the second network as the source address of the new packet.

21-38. (canceled)

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